ADDENDUM

for

MODELS NF-105 & NF-105/M-126
(Effective on Basic Unit Serial No. U40397 and up)

I. PURPOSE.

To provide information on electronic voltage regulator which replaces electro-magnetic regulator employed in previous units.

II. ADDENDUM.

a. Change the title of table 1-12 to read "ELECTRON TUBE, TRANSISTOR AND CRYSTAL DIODE COMPLEMENT" and add the following entries to the listing for the Models BA-105 and BA-105/M-126 Basic Measuring Units.

Reference Symbol Number	Electron Tube, Transistor or Crystal Diode Type	Function
A1BR1	MDA 952-2 (Motorola)	Full-wave bridge rectifier
A1CR1 through CR4	1N4002	Full-wave bridge rectifier
A1CR5	1N4002	Half-wave rectifier
A1CR6	1N969	Voltage regulator
A1CR7	1N821	Voltage reference
A1CR8	1N3005	Transient suppressor
A1Q1 and Q2	2N2222	Emitter-coupled difference amplifier
A1Q3 and Q4	40327 (RCA)	Current amplifiers
A1Q5	2N4348	Series regulator

b. Change paragraph 3-60 to read:

"3-60. Regulation is accomplished by electronic regulator A1 which constantly samples the power line voltage to maintain the voltage across the primary terminals (1 and 2)of

power transformer T11 constant at nominally 98 volts rms. The +150, +250, and +300 vdc supplies...."

c. Add the following note between paragraphs 4-22 and 4-22a:

CAUTION

The case of A1Q5 is floating with respect to chassis ground and is a potential shock hazard. Avoid contact with the case of this transistor.

d. Change paragraph 4-19c to read:

" c. Measure the voltage across terminals 1 and 2 of power transformer T11; it should be nominally 98 volts rms. If this voltage is present, measure the power supply voltages as specified in table 4-8; if the voltage is not present, measure the voltages of regulator A1 (see table 4-17)".

e. Change paragraph 4-22a to read:

".... installed (if available), connect the common lead of a VOM (set to the +50 volt range) to A1TP2; connect the +lead to A1TP1. Apply operating power to the equipment...."

f. Change paragraph 4-22b to read:

" b. Adjust A1R10 to obtain a VOM indication of 31.5 volts".

g. Add the following table after table 4-16:

TABLE 4-17. VOLTAGE MEASUREMENTS, VOLTAGE REGULATOR A1

Reference Symbol Number	Transistor Type	Nominal Emitter Voltage	Nominal Base Voltage	Nominal Collector Voltage
Q1	2N2222	+5.6	+6.2	+19.0
Q2	2N2222	+5.6	+6.2	+19.0
Q3	40327 (RCA)	+18.4	+19.0	+37.0
Q4	40327 (RCA)	+17.8	+18.4	+37.0
Q5	2N4348	+17.3	+17.8	+37.0

Notes: 1. All voltages measured with a 20,000 ohm/volt VOM with respect to A1TP2.
2. Tuning Unit is connected to basic unit.

h. Replace figure 5-1 (sheet 1 of 3) with that furnished as part of this addendum.

i. Add the following vendors to table 6-1:

INSTD	Industry Standard
04713	Motorola Semiconductor Products, Inc. Phoenix, Arizona
86684	Radio Corp. of America Electronic Devices & Components Harrison, N.J.
90201	Mallory Capacitor Co. Indianapolis, Ind.
93790	Cornell-Dubilier Electronic Division New Bedford, Mass.
97965	Stancor Division Chicago, Ill.

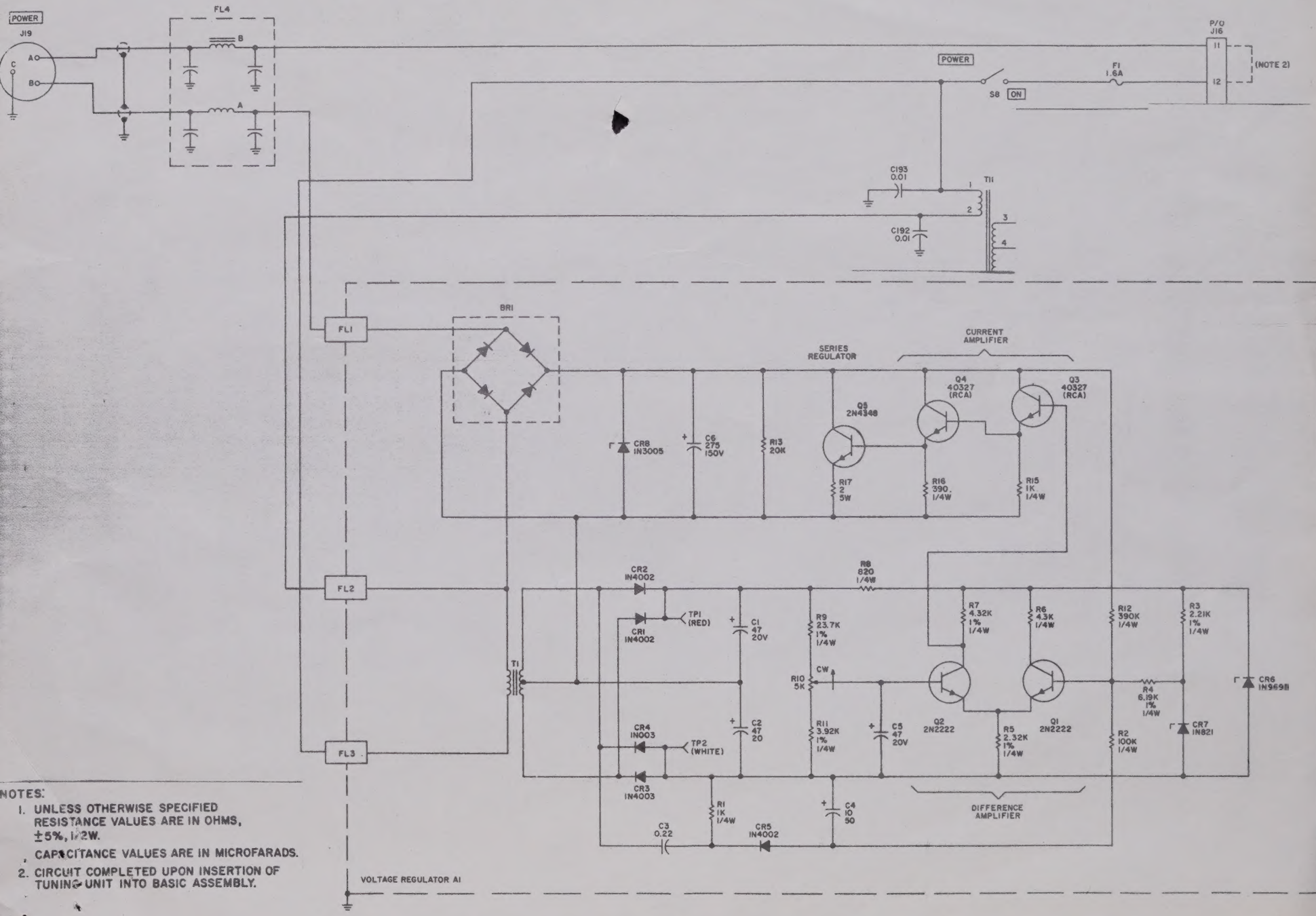
j. Delete "82116, Electric Regulator Corp., Norwalk, Conn." from table 6-1.

k. Delete the entries for FL6, FL7, F18, J20, R168 through R170, R257 through R266 and VR1 from table 6-2.

l. Add the following entries to table 6-2.

Ref Symbol	Description	Manufacturer's Part Number	Mfr's Code	Maint Qty
A1	REGULATOR, LINE VOLTAGE	103-1800-001	16665	1
A1BR1	RECTIFIER, FULL-WAVE BRIDGE	MDA 952-2	04713	1
A1CR1 THRU CR5	DIODE SINGER PART NO. 556118-176	1N4002	INSTD	1
A1CR6	DIODE, ZENER SINGER PART NO. 556166-037	1N969B	INSTD	1
A1CR7	DIODE, ZENER SINGER PART NO. 556147-122	1N821	INSTD	1
A1CR8	DIODE, ZENER SINGER PART NO. 556118-187	1N3005	INSTD	1
A1C1 AND C2	CAPACITOR, FIXED, ELECTROLYTIC, 47UF, PORM 20 PCT, 20 WVDC SINGER PART NO. 150-5008-001	150D476X0020R2	56289	1
A1C3	CAPACITOR, FIXED, FILM 0.22 UF, PORM 10 PCT, 80 VDC SINGER PART NO. 150-6000-001	192P2249R8	56289	1
A1C4	CAPACITOR, FIXED, ELECTROLYTIC, 10 UF, PORM 20 PCT, 50 WVDC SINGER PART NO. 150-5008-002	150D106X0050R2	56289	1
A1C5	SAME AS A1C1			
A1C6	CAPACITOR, FIXED, ELECTROLYTIC, 270 UF, 150 WVDC SINGER PART NO. 150-5009-001	UFH 270-150	93790	1
A1FL1 THRU FL3	FILTER ASSY	006933-001	16665	1
A1Q1 AND Q2	TRANSISTOR SINGER PART NO. 153-0005-001	2N2222	INSTD	1
A1Q3 AND Q4	TRANSISTOR SINGER PART NO. 556147-124	40327	86684	1
A1Q5	TRANSISTOR SINGER PART NO. 153-0003-001	2N4348	INSTD	1
A1R1	RESISTOR, FIXED, COMPOSITION, 1000 OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-102J	CB1025	01121	1
A1R2	RESISTOR, FIXED, COMPOSITION, 100 K OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-104J	CB1045	01121	1
A1R3	RESISTOR, FIXED, DEP. CARBON, 2210 OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B2211F	C1/8E2210PORM1PCT	12126	1
A1R4	RESISTOR, FIXED, DEP. CARBON, 6190 OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B6191F	C1/8E6190PORM1PCT	12126	1
A1R5	RESISTOR, FIXED, DEP. CARBON, 2320 OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B2321F	C1/8E2320PORM1PCT	12126	1

Ref Symbol	Description	Manufacturer's Part Number	Mfr's Code	Maint Qty
A1R6	RESISTOR, FIXED, COMPOSITION, 4.3 K OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-432J	CB4325	01121	1
A1R7	RESISTOR, FIXED, DEP. CARBON, 4320 OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B4321F	C1/8E4320PORM1PCT	12126	1
A1R8	RESISTOR, FIXED, COMPOSITION, 820 OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-821J	CB8215	01121	1
A1R9	RESISTOR, FIXED, DEP. CARBON, 23.7K OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B2372F	C1/8E23700PORM1PCT	12126	1
A1R10	RESISTOR, VARIABLE, 5 K OHMS, PORM 20 PCT, 1/3 W SINGER PART NO. 556147-253	NP502M	01121	1
A1R11	RESISTOR, FIXED, DEP. CARBON, 3920 OHMS, PORM 1 PCT, 1/4 W SINGER PART NO. 151-1006-B3921F	C1/8E3920PORM1PCT	12126	1
A1R12	RESISTOR, FIXED, COMPOSITION, 390 K OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-394J	CB3945	01121	1
A1R13	RESISTOR, FIXED, COMPOSITION, 20 K OHMS, PORM 5 PCT, 1/2 W SINGER PART NO. 151-1003-203J	EB2035	01121	1
A1R15	SAME AS A1R1			
A1R16	RESISTOR, FIXED, COMPOSITION, 390 OHMS, PORM 5 PCT, 1/4 W SINGER PART NO. 151-1002-391J	CB3915	01121	1
A1R17	RESISTOR, FIXED, WIRE WOUND, 2 OHMS, PORM 5 PCT, 5 W SINGER PART NO. 556043-001	5X2	63743	1
A1TP1	TEST POINT, RED SINGER PART NO. 168-6002-01R	105-752	74970	1
A1TP2	TEST POINT, WHITE SINGER PART NO. 168-6002-01W	105-751	74970	1
A1T1	TRANSFORMER, STEP-DOWN SINGER PART NO. 156-1003-001	P8394	97965	1



NOTES:

1. UNLESS OTHERWISE SPECIFIED RESISTANCE VALUES ARE IN OHMS, ±5%, 1/2W.
   CAPACITANCE VALUES ARE IN MICROFARADS.
2. CIRCUIT COMPLETED UPON INSERTION OF TUNING UNIT INTO BASIC ASSEMBLY.